

IN THE CLAIMS

Please amend claims 4 as follows:

Claims 1-3 (Canceled).

Claim 4 (Currently Amended): A membrane artificial lung for performing gas exchange between blood and a gas via the membrane by flowing blood on a first surface of the membrane and flowing oxygen or an oxygen-containing gas on a second opposing surface of the membrane,

said membrane comprising:

a hollow fiber membrane comprising poly-4-methylpentene-1, and having an oxygen permeation rate $Q(O_2)$ at 25°C of from 5×10^{-4} to 2×10^{-3} ~~1×10^{-6} to 3×10^{-3}~~ (cm³(STP)/cm².sec.cmHg) and an ethanol flux of from 0.1 to 100 ml/min.m²; and

an ionic complex provided on said first surface of said membrane, said ionic complex comprising:

a first quaternary aliphatic alkylammonium salt having from 22 to 26 carbon atoms in total;

a second quaternary aliphatic alkylammonium salt having from 37 to 40 carbon atoms in total; and

heparin or a heparin derivative.

Claim 5 (Previously Presented): The membrane artificial lung according to claim 4, said first quaternary aliphatic alkylammonium salt comprises 5 to 35 wt% of the weight of said first and said second quaternary aliphatic alkylammonium salts, and said second quaternary aliphatic alkylammonium salt comprises from 65 to 95 wt% of said weight of said first and said second quaternary aliphatic alkylammonium salts.

Claim 6 (Previously Presented): The membrane artificial lung according to claim 4, said first quaternary aliphatic alkylammonium salt comprises a dimethyldiododecylammonium salt and said second quaternary aliphatic alkylammonium salt comprises a dimethyldioctadecylammonium salt.

Claim 7 (Previously Presented): The membrane artificial lung according to claim 5, said first quaternary aliphatic alkylammonium salt comprises a dimethyldiododecylammonium salt and said second quaternary aliphatic alkylammonium salt comprises a dimethyldioctadecylammonium salt.